

Hydrologic Forecast for Augusta/Elk Creek

CONDITIONS 06/07/2020

Lewis & Clark County Water Quality Protection District

SUMMARY

Elk Creek is a non-gauged stream, therefore regional USGS gauging stations 0608220 (Sun River below Willow Cr), 06079000 (South Fork Sun River near Augusta MT) and 06073500 (Dearborn River at Craig) are used as surrogates to evaluate the timing of spring runoff and may be used to track rising river stage in the area.

With the exception of the recent June 7th thunderstorm-related rises in streamflow, flows on the Dearborn River and S Fork Sun River appear to be on the decline after the warm & windy weather of the previous weekend. A late spring storm is forecast for early this week (M-T), and precipitation and runoff from this event will cause local streams to rise, and some drainage areas could see some short-term runoff flooding.

It is possible that segments of Elk Creek may experience unpredictable response to high-water events due to infrastructure damage and/or channel disruptions from the events of 2018 and 2019.

The following data and information are used to assess hydrologic conditions in the Elk Creek drainage.

1. Surrogate **streamflow**
<https://waterdata.usgs.gov/monitoring-location/06082200>
<https://waterdata.usgs.gov/monitoring-location/06079000>
<https://waterdata.usgs.gov/monitoring-location/06073500>
 2. **Snowpack** snow water equivalent (SWE) at the Wood Creek SNOTEL Station west of Augusta
<https://www.nwrfc.noaa.gov/snow/snowplot.cgi?WODM8>
 3. Short-term Augusta 5-day weather (**precipitation and temperature**) projection from the National Weather Service
<https://forecast.weather.gov/MapClick.php?lat=47.4927&lon=-112.3938#.XpooZUZKjGg>
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1. STREAMFLOW

Streamflow at the South Fork Sun River and the Dearborn River over the past 30 days is shown below. Note May 21st peak from precipitation, June 1st peak from warm weather runoff, and recent June 7th peak from recent precipitation/thunderstorms. With the exception of the recent June 7th thunderstorm-related rises in streamflow, flows on the Dearborn River and S Fork Sun River appear to be on the decline after the warm & windy weather of the previous weekend.

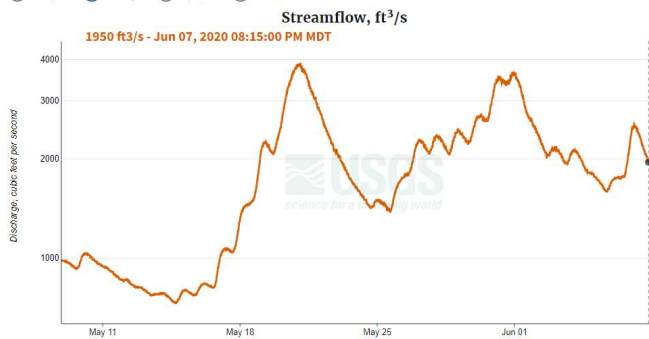
Precipitation forecast for the early part of the week will cause local streams to rise, and some drainage areas could see some short-term runoff flooding.

South Fork Sun River near Augusta MT

IMPORTANT Classic Page

Monitoring location 06079000 is associated with a STREAM in LEWIS AND CLARK COUNTY, MONTANA. Current conditions of DISCHARGE and GAGE HEIGHT are available. Water data back to 1911 are available online.

☐ 7 days ☒ 30 days ☐ 1 year ☐ Custom

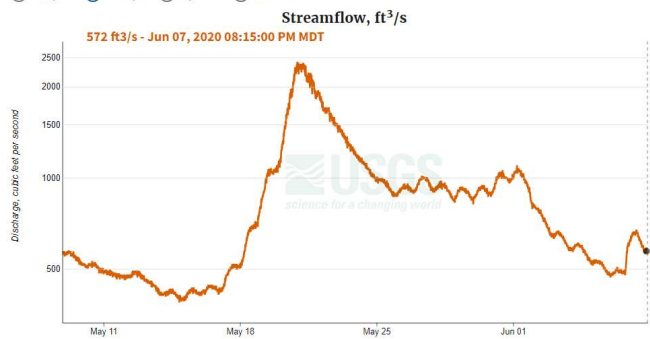


Dearborn River near Craig MT

IMPORTANT Classic Page

Monitoring location 06073500 is associated with a STREAM in LEWIS AND CLARK COUNTY, MONTANA. Current conditions of DISCHARGE, GAGE HEIGHT, and TEMPERATURE are available. Water data back to 1945 are available online.

☐ 7 days ☒ 30 days ☐ 1 year ☐ Custom



2. SNOWPACK (SWE)

Snowpack at Wood Creek Snotel station is gone and it's unclear how much snow remains at higher elevations west of Augusta. Regional Snotel stations show little snowpack remaining at elevations up to 8,000'.

3. WEATHER

Monday through next Friday... Rainfall and snow at higher elevations above 5,500' is expected for the early part of the week, with up to 1.5" of rain forecast for the Great Falls area. After this initial precipitation event, expect generally improving conditions, but still below seasonal average temperatures.